



# Web application SOLICS (ErP)

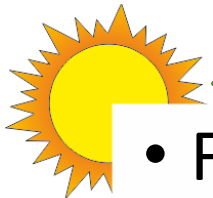
SCF 10C10 DST-Extension-Qnonsol

vAConsult

G. van Amerongen

# Introduction

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- Framework ErP, SDWH
  - Numeric inputs for ErP documents
  - SOLCAL method
    - Based on CEN EN 15316-4-3, m2 (EPBD)
    - Simple web applications available
  - SOLICS method
    - Based on CEN EN 12976-2 (DST)
    - No simple tools available
- New web tool available for evaluation
  - <http://www.vaconsult.net/SOLICS>

# For whom



- Companies that have their SDHW system tested according to EN 12976-2
  - and according to DST method (not CSTG)
  - and we a test report containing the DST parameters
- or for datasheets with the DST parameters included in the database.
  - Copy and paste the data
- and do not have the ErP data included in their datasheets
  - Not many available as yet!

- Enter the DST parameters and calculate the performance


vA Consult  Manual ... Evaluation only ... SOLICS 

Brand:

Type:

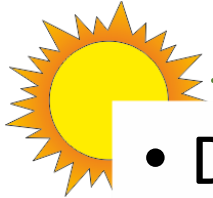
$A_c$ =	<input data-bbox="1796 685 1885 714" type="text" value="3.563"/>	$m^2$	<i>effective collector area</i>
$u_c$ =	<input data-bbox="1796 721 1885 749" type="text" value="7.95"/>	$W/(m.K)$	<i>effective collector loss coefficient</i>
$U_s$ =	<input data-bbox="1796 756 1885 785" type="text" value="3.244"/>	$W/K$	<i>store heatloss coefficient</i>
$C_s$ =	<input data-bbox="1796 792 1885 821" type="text" value="1.224"/>	$MJ/K$	<i>store heat capacity</i>
$f_{aux}$ =	<input data-bbox="1796 828 1885 856" type="text" value="0.3893"/>	-	<i>fraction auxiliary heating</i>
$D_L$ =	<input data-bbox="1796 863 1885 892" type="text" value="0.01408"/>	-	<i>Mixing constant</i>
$S_c$ =	<input data-bbox="1796 899 1885 928" type="text" value="0.0113"/>	-	<i>stratification parameter</i>
$R_L$ =	<input data-bbox="1796 935 1885 963" type="text" value="0"/>	$10^{-3} K/W$	<i>resistance load side heat exchanger</i>
$u_v$ =	<input data-bbox="1796 971 1885 999" type="text" value="0"/>	$J/(m^3.K)$	<i>wind velocity dependence</i>
Tank location:	<input data-bbox="1796 1006 1949 1035" type="text" value="Inside"/>		<i>from system specs</i>
$P_{aux}$ =	<input data-bbox="1796 1042 1885 1071" type="text" value="20000"/>	$W$	<i>Power auxiliary (backup) heater</i>
$P_{pump}$ =	<input data-bbox="1796 1078 1885 1106" type="text" value="20"/>	$W$	<i>nominal pump power</i>
$P_{standby}$ =	<input data-bbox="1796 1113 1885 1142" type="text" value="4"/>	$W$	<i>standby power consumption</i>

Optional: paste data from Solar Keymark database

 Calculate *This may take up to 60 seconds*

This project was financed /or partly financed by the Solar Certification Fund (SCF) of the Solar Keymark Network (SKN).

# What to do with the tool



- Draft the ErP documentation:
  - Technical document en product fiche
- For package solar water heater
  - Enter the  $Q_{nonsol}$  result
- For solar water heaters
  - Enter the  $Q_{nonsol}$  result
  - Some additional test may be needed

## Reporting format in the framework of the EU Regulations CDR 811, 812 and 814 dated 2013

The annual performance parameters are determined according to the requirements for the SOLICS method of the EU regulations: CDR 811/2013 and CDR 812/2013 (ErP) as described in the annex B of the CEN EN12976-2:2017. The test results are according to ISO 9459-5.

Date: 21.10.2019

Brand name:   
 Type name:   
 Model name:   
 System type: Solar Plus Supplementary *According to ISO 9488:1999*  
 Auxiliary heat source: Integrated / External *Select appropriate option*  
 Auxiliary power source: Fuel / Electrical  
 Auxiliary thermostat setting: 60 °C *Solar-plus-supplementary systems onl*  
 Power of auxiliary heaters: 20.0 kW

### Annual performance parameters:

Load profile:	M	L	XL	XXL	
Annual heat demand:	1523	2799	4427	5626	
Auxiliary heat contribution:	$Q_{nonsol}$				
Average climate:	559	1139	2137	3136	in kWh, Strasbourg
Colder climate:	791	1515	2681	3741	in kWh, Helsinki
Warmer climate:	204	513	1191	2050	in kWh, Athens
Comply to the load profile:	Yes	Yes	Yes	Yes	subclause 5.10.6
$\eta_{wh,nonsol}$ :					in %, subclause 5.9.3.5
$Q_{elec}$ :					in kWh, subclause 5.9.3.5
$Q_{fuel}$ :					in kWh, subclause 5.9.3.5
$V_{40,measured}$ :					in litres, subclause 5.10.7
$Q_{aux}$ :	75				in kWh

# Almost ready

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- Some evaluations are still pending.
  - We want to make sure that the results are okay.
- In the meantime:
  - Try it yourselves
- Remarks:
  - The DST software is outdated
    - **Runs on msDOS**
  - For that reason it may be slow.
- During evaluation, I only have one msDos machine running
  - Many users at the same time may decrease the performance